

Potential benefits of delta encoding and data compression for HTTP (1997) (Make

[Corrections](#)) (136 citations)

Jeffrey C. Mogul, et al.

SIGCOMM

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Abstract: ing with credit is permitted. To copy otherwise, to republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Abstract Caching in the World Wide Web currently follows a naive model, which assumes that resources are referenced many times between changes. The model also provides no way to update a cache entry if a resource does change, except by transferring the resource's entire new value. Several previous papers have proposed updating cache... [\(Update\)](#)

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.... [25] measures gains involved in piggybacking invalidates along with reply messages in order to lower the number of IMS requests, and [30] investigates delta encoding as a means of update propagation, only [13] proposes a technique for deciding the basis for propagating...

...of cache consistency or content distribution. For instance, piggybacking of invalidations [15] the use of deltas for sending updates [17], an application level multicast framework for internet distribution [9] the efficacy of sending updates versus invalidates [8] and...

Cited by: [More](#)

Dynamic Suppression of Similarity in the Web: a Case for . . . - Douglass, Iyengar (2002) [\(Correct\)](#)

Workload Characterization of a Personalized Web Site .. - Shi, Wright.. (2002) [\(Correct\)](#)

Scalable Consistency Maintenance in Content.. - Ninan, Kulkarni.. [\(Correct\)](#)

Similar documents (at the sentence level):

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44: Rate of change and other metrics: A live study of the World Wide Web - Douglass, Feldmann et al. - 1997

34: Exploring the bounds of Web latency reduction from caching and prefetching - Kroeger, Long et al. - 1997

33: System design issues for Internet middleware services: Deductions from a large c.. - Gribble, Brewer - 1997

BibTeX entry: [\(Update\)](#)

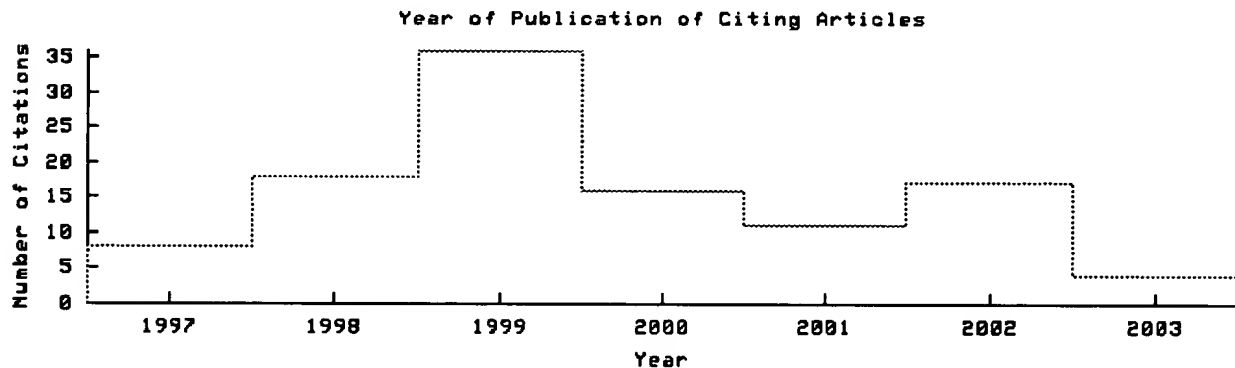
J. C. Mogul, F. Douglass, A. Feldmann, and B. Krishnamurthy. Potential benefits of delta encoding and data compression for HTTP. In Proceedings of the ACM SIGCOMM '97 Symposium, Cannes, France, Sept. 1997.

<http://citeseer.nj.nec.com/article/mogul97potential.html> [More](#)

```
@inproceedings{ mogul97potential,  
  author = "Jeffrey C. Mogul and Fred Dougkis and Anja Feldmann and Balachander K  
  title = "Potential Benefits of Delta Encoding and Data Compression for {HTTP}",  
  booktitle = "{SIGCOMM}",  
  pages = "181-194",  
  year = "1997",  
  url = "citeseer.nj.nec.com/article/mogul97potential.html" }
```

Citations (may not include all citations):

- 219 Web Server Workload Characterization: The Search for Invaria.. - Arlitt, Williamson - 1996
- 168 Removal Policies in Network Caches for World-Wide Web Docume.. - Williams, Abrams et al. - 1996
- 136 Potential benefits of delta encoding and data compression fo.. - Mogul, Dougkis et al. - 1997
- 133 Rate of Change and Other Metrics: A Live Study of the World .. - Dougkis, Feldmann et al. - 1997
- 113 RCS - A System For Version Control - Tichy - 1985
- 57 Optimistic Deltas for WWW Latency Reduction - Banga, Dougkis et al. - 1997
- 52 IP Headers for LowSpeed Serial Links (context) - Jacobson - 1990
- 44 WebExpress: A System for Optimizing Web Browsing in a Wirele.. (context) - Housel, Lindquist - 1996
- 44 Data Compression - Lelewer, Hirschberg - 1987
- 33 Adapting to Network and Client Variation via On-Demand Dynam.. (context) - Fox, Gribble et al. - 1996
- 18 Network Performance Effects of HTTP (context) - Nielsen, Gettys et al. - 1997
- 16 An Empirical Study of Delta Algorithms - Hunt, Vo et al. - 1996
- 11 Personal communication (context) - Williams - 1996
- 8 Libraries and File System Architecture (context) - Fowler, Korn et al. - 1995
- 4 and Portable Network Monitor (context) - McCanne, Jacobson et al.



The graph only includes citing articles where the year of publication is known.

Documents on the same site (<http://www.research.att.com/~dougkis/vita.html>): [More](#)

Adaptive Modern Connection Lifetimes - Dougkis, Killian (1999) [\(Correct\)](#)

Rate of Change and other Metrics: a Live Study of the .. - Dougkis, Feldmann.. (1997) [\(Correct\)](#)

Performance of Web Proxy Caching in Heterogeneous.. - Feldmann.. (1999) [\(Correct\)](#)

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[Optimizing ML with Run-Time Code Generation - Leone, Lee \(1995\) \(Correct\) \(91 citations\)](#)

We describe the design and implementation of a **compiler** that automatically translates ordinary programs

Optimizing ML with Run-Time **Code** Generation Mark Leone Peter Lee December 1995

foxnet.cs.cmu.edu/~petel/papers/staged/mleone-pidi96.ps

[Coded Modulation for Differential Encoding and... - Fischer, Lampe... \(2000\) \(Correct\)](#)

Coded Modulation for **Differential Encoding** and

Coded Modulation for **Differential Encoding** and Non-Coherent Reception on Fading

www.LNT.de/LNT2/papers/ltg00_mlc.ps.gz

[Foreign Event Handlers to Maintain Information Consistency and... - Queloz \(1999\) \(Correct\)](#)

paper is to describe novel applications of Mobile **Code** technology which have not appeared yet but should

by Mobile **C**ode still have to agree on high level **encoding** and synchronization primitives but these

cuiwww.unige.ch/~queloz/papers/mac3.1999.ps.gz

[Differential Encoding Strategies for Transmission... - Fischer, Lampe... \(2000\) \(Correct\)](#)

Keywords Fading channels, **differential encoding**, **coded** modulation, multilevel **codes**, channel capacity 1.

Submitted to AE Int. J. Electr. Commun. 1 **Differential Encoding** Strategies for Transmission over

www-nt.e-technik.uni-erlangen.de/~dco/papers/aeu_00.ps.gz

[Adaptive Chain Coding for Arbitrary Curves - Chang Kulkarni \(Correct\)](#)

using the 8-connected chain **code** to further **compress** the data 5 See 6 7 8 for other

(b) 8-connected templates technique. Standard chain **codes** use straight line segments of predetermined multiple templates is developed. The algorithm **differentially encodes** a curve using a directional template.

www-video.eecs.berkeley.edu/~nlachang/Research/spie92.ps.gz

[Massively Parallel Computing: Mathematics and communications... - Johnsson, Mathur \(1993\) \(Correct\)](#)

heavily upon the availability of libraries until **compilation** and run-time system technology is

59]In mature architectures, **compiler** generated **code** with supporting run-time systems achieves an

complete aircraft. Solution techniques based on **differential** equations lead to sparse systems of equations,

ftp.das.harvard.edu/techreports/tr-01-93.ps.gz

[Iterative Joint Design of Fixed-Rate Source Codes and... - Goldsmith, Effros \(1997\) \(Correct\)](#)

While variable-rate source **codes** achieve better **compression** for a given distortion and source vector

Iterative Joint Design of Fixed-Rate Source **Codes** and Multiresolution Channel **Codes** Andrea

www.cco.caltech.edu/~rjm/effros/papers/ct97.ps.Z

[DEFLATE Compressed Data Format Specification version 1.3 - Deutsch \(1996\) \(Correct\) \(4 citations\)](#)

Category: Informational May 1996 DEFLATE **Compressed** Data Format Specification version 1.3 Status of

ftp.kiae.su/pub/1/Internet/rfc/rfc1951.ps

[TIL: A Type-Directed Optimizing Compiler for ML - Tarditi, Morrisett, Cheng \(1995\) \(Correct\) \(116 citations\)](#)

TIL: A Type-Directed Optimizing **Compiler** for ML David Tarditi Greg Morrisett Perry

www.cs.cmu.edu/~rwh/papers/tit/tr.ps

[Typed Closure Conversion for Recursively-Defined Functions... - Morrisett, Harper \(1998\) \(Correct\) \(2 citations\)](#)

[2]and was used until recently in the SML/NJ **c** **mpiler** [3]Closure-passing does have its drawbacks:

a data structure consisting of a pointer to closed **code** and another data structure which represents the

here have a direct correspondence to type **encodings** used for various kinds of object-oriented

cs.cornell.edu/home/jgm/papers/hootsclosure.ps

[The Jalapeño Dynamic Optimizing Compiler for Java - Burke, Choi, Fink... \(1999\) \(Correct\) \(24 citations\)](#)

20.23 11.58 1.75 0.98 Array 4.95 10.15 1.01 0.84 **C** **mpress** 85.67 46.08 5.86 7.23 DB 7.18 3.89 1.73 2.94

The Jalapeño Dynamic Optimizing **Compiler** for Java TM Michael G. Burke Jong-Deok Choi

www.mcs.newpaltz.edu/~hind/papers/grandes.ps

An Integrated Compilation and Performance Analysis Environment for ... - Adve (1995) (Correct) (30 citations)
Overview pane at the top of the window shows a "**compressed**" view of the Erlebacher source **code**, with only
An Integrated **C mpilation** and Performance Analysis Environment for
vibes.cs.uiuc.edu/Publications/Papers/HPF.ps.gz

A Supersymmetry Approach To Poisson Structures Over... - Krasilshchik (1995) (Correct)

Differential Geometry And Applications Proc. Conf.Aug.
cimn.univ-mrs.fr/pub/EMIS/proceedings/6ICDGA/IV/krasil.ps

Generalized Differential Encoding: A Nonlinear Signal... - Gini, Giannakis (1998) (Correct) (2 citations)
PSK demodulator for LEO satellite direct sequence/**code** division multiple access (DS/CDMA) communications
VOL. 46, NO. 11, NOVEMBER 1998 2967 Generalized Differential Encoding: A Nonlinear Signal Processing
11, NOVEMBER 1998 2967 Generalized Differential Encoding: A Nonlinear Signal Processing Perspective
spincom.ece.umn.edu/download/sp98gini.pdf

Performance of Coded Modulation employing... - Fischer... (Correct)

Performance of **Coded** Modulation employing **Differential Encoding** over
Performance of **Coded** Modulation employing **Differential Encoding** over Rayleigh Fading Channels Robert
of **Coded** Modulation employing **Differential Encoding** over Rayleigh Fading Channels Robert F.H.
www-nt.e-technik.uni-erlangen.de/~dcg/papers/elet3.ps.gz

Evaluating Runtime-Compiled Value-Specific Optimizations - Keppel, Eggers, Henry (1993) (Correct) (24 citations)

directly [Kes90]Data Decompression The **compression** algorithm is optimized for fast decompression
Evaluating Runtime-**Compiled** Value-Specific Optimizations 1 Evaluating
ftp.cs.washington.edu/tr/1993/11/UW-CSE-93-11-02.PS.Z

Of What Use is a Verified Compiler Specification? - Curzon (1992) (Correct) (1 citation)

Of What Use is a Verified **Compiler** Specification? Paul Curzon Technical Report
www.cl.cam.ac.uk/ftp/hvg/papers/WhyCompilerSpec.ps.gz

Compiling Standard ML to Java Bytecodes - Benton, Kennedy, Russell (1998) (Correct) (27 citations)

C mpiling Standard ML to Java Bytecodes Nick Benton,
www.cl.cam.ac.uk/users/pnb/icfp98.ps.gz

Performance Comparison Of Video Transport Over ATM... - Hossain, Kang, Horst (Correct)

can transmit, receive, decompress and display **compressed** video over various networks. Our video
berserk.vlsi.uiuc.edu/people/ashfaq/ieee.mm97.ps

Programming Language Support for Digitized Images or, The... - Stevenson, Fleck (Correct) (2 citations)

scanners (e.g. MRI)Although they can be **compressed** when stored in files, images must remain
operations that loop through images must be **compiled** from (a specialized subset of) Scheme into C.
research results. This paper shows how user-level **code** can be simplified by providing better programming
www.cs.hmc.edu/~fleck/envision/scheme48/top-dir/compiler/top-dir/patches/top-dir/digitized-images.ps

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